REFLEX ACTION INCIDENTS DETECTION FOR INTELLIGENT VIDEO SURVEILLANCE

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ABSTRACT: A reflex is an involuntary muscle reaction in response to sensory stimulation that brings about a change. Some changes are clearly visible while others are not, depending on the distances between the surveillance camera and subjects. Incidents are unexpected occurrences that could cause harm or destroy the property being protected. Intelligent video surveillance system requires fast and robust methods of moving object detection, tracking, and event analysis. They are more useful if they can report reflexes that result from critical incidences. There are incidences that happen in solitude and the subjects may need assistance. A combination of thresholding and frame differencing proved to be a simpler method for object detection and event analysis for automatic reflex action incidents detection. The "knee jack" response of limbs is normally caused by unexpected reaction or presence of an unexpected frightening item or occurrence in a scene. Unlike other incident detection methods, this is not based on predetermined and classified human behavior. The identification of reflex action incidents in the scene can then be used to raise an alarm or notification to the human operators for necessary security action.

Keywords: Security, video surveillance, reflexes, incidents.

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